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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,834	12/20/2001	Ralph Lipp	SCH-1859	1489

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EXAMINER
YOUNG, MICAH PAUL

ART UNIT	PAPER NUMBER
1615	9

DATE MAILED: 07/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/022,834	LIPP ET AL.	
	Examiner	Art Unit	
	Micah-Paul Young	1615	

-- The MAILING DATE of this communicati n appears n the cover sheet with the corresp ndence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 April 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *8* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Acknowledgment of Papers Received: Amendment and Response dated 4/14/03.

Claim Objections

1. Claims 1, 2 and 4 are objected to because of the following informalities: In claims 1 and 4, (21S)-21-hydroxy-21-methyl-14,17-ethano-19-norpregna-4,9-diene-3,20-dione is misspelled *(21S)-21-hydroxy-21-methyl-14,1- 7-ethano-19-norpregna-4,9-diene-3,20-dione* and *(21S)-21-hydroxy-21-methyl-14,17-ethano-19-norpregna-4,9-diene-3,20-d- ione* respectively. In claim 2 ethylhexylacrylate is misspelled *ethyhexyhexylacrylate.* Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cygnus (WO 96/40087) and Lipp et al (USPN 5,676,968) both in view of Schollkopf et al (USPN 5,827,842) or vice versa al in further view of Hansen et al (USPN 5,120,546). The claims are drawn to a transdermal delivery system for delivering gestagens. The matrix of the transdermal delivery system is a polyacrylate adhesive, comprising copolymers of various acrylic monomers

such as hydroxyethylacrylate and 2-ethylhexylacrylate. The matrix further comprises β-cyclodextrin as a crystallization inhibitor. The matrix also comprises penetration enhancers such as lauryl alcohol, and methyl esters.

Li et al teaches a transdermal delivery system where the matrix is a polyacrylate adhesive. The matrix is a copolymer of 2-ethylhexylacrylate and hydroxyhexylacrylate and further comprises estradiol and other gestagens (pg. 3, lin. 15 – pg. 4, lin. 12; examples). The reference however is silent to other components found common in the art, components such as stabilizers and penetration enhancers. These components are well known in the art, and would be incorporated in to any transdermal composition to improve the stability, performance and drug delivery of the formulation.

As seen in Lipp et al, which teaches a transdermal delivery of drugs, the formulation comprises stabilizers (crystallization inhibitors) such as N-vinylpyrrolidone products and derivatives like Kollidon® and dextrins such as β-cyclodextrin. The matrix of the reference is a polyacrylate adhesive that incorporates penetration enhancers such as lauryl alcohol, glycerol and urea (col. 2, lin. 4 – 67, examples).

What is lacking in these references is a disclosure of the particular potent gestagen of the claimed invention. Schollkopf et al discloses a potent gestagen (example 26 and 27). The reference discloses (21S)-21-hydroxy-21-methyl-14,17-ethano-19-norpregna-4,9-diene-3,20-dione, and suggests that the compound can be formulated into transdermal preparations (col. 6, lin. 29 – 31).

Also applicant recites lecithin as the penetration-enhancing agent used in the transdermal preparation. Hansen et al discloses a transdermal formulation comprising polyacrylate as the

matrix material, lecithin as a penetration enhancer (col. 8, lin. 29 – 38), and estradiol as an active agent (col. 6, lin. 38 – 43). A skilled artisan would have been motivated to use the lecithin of Hansen in order to improve the delivery f the gestagen in the combination. Also the formulation of Hansen comprises many of the same components as Lipp and Cygnus, specifically polyacrylate matrices, with similar penetration enhancers delivering estradiols.

With regard to claim 11, which recites concentrations for the potent gestagen of the transdermal system, it is the position of the examiner that this concentration does not impart patentability on the claimed invention. The concentration recited a concentration that can be determined through routine experimentation. It has been held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *See* In re Aller, 220 F.2d 454 105 USPQ 233, 235 (CCPA 1955).

Furthermore the claims differ from the reference by reciting various concentrations of the active ingredients. However, the preparation of various transdermal compositions having various amounts of the active is within the level of skill of one having ordinary skill in the art at the time of the invention. It has also been held that the mere selection of proportions and ranges is not patentable absent a showing of criticality. *See* In re Russell, 439 F.2d 1228 169 USPQ 426 (CCPA 1971).

With regard to claim 16 which discloses the estrogen as estradiol-3,17-betadiproprionate, it is the position of the examiner that this limitation does not impart patentability on the claimed invention since the compound of the invention and those of the presented are chemical analogues. Hansen discloses the use of estradiol –3,17-diacetate as a drug in the composition

(col. 7, lin. 59 – 61). Estradiol-3,17-diacetate is a similar composition (differing only by two methyl groups) and is used for the same purpose in a similar matrix environment. It would be obvious to substitute the two compounds since they perform the same function, are derived from the same source and are delivered through a similar if not identical environment.

With these things in mind it would have been obvious to one of ordinary skill in the art to combine the teachings of and suggestions of the art. A skilled artisan would have combined the crystallization inhibitors of Lipp with the matrix of Cyngus in order to reduce crystallization and improve delivery. Lipp and Cyngus both comprise polyacrylate matrices, and a skilled artisan would expect the combination to be successful. The skilled artisan would have been motivated to include the permeation enhancers and active agents (estradiol-3,17-diacetate) of Hansen in order to better deliver the composition through the skin. A skilled artisan would have been motivated to follow the suggestion of the art in order to optimize and maximize the delivery of the active agents. A skilled artisan would have followed the suggestions of Schollkopf to deliver the potent gestagen of the invention transdermally, and included the gestagen in a combination of Lipp and Cygnus in order to provide a transdermal with better cohesive strength that delivered gestagens better. From this combination it would have been expected to achieve a structurally cohesive transdermal delivering potent gestagens.

Response to Arguments

3. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Micah-Paul Young whose telephone number is 703-308-7005. The examiner can normally be reached on M-F 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K Page can be reached on 703-308-2927. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7648 for regular communications and 703-746-7648 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.

Micah-Paul Young
Examiner
Art Unit 1615

MP Young
July 7, 2003

THURMAN K. PAGE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600